

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-21 (Canceled).

Claim 22 (Currently Amended): A blade resulting from an initial step of compression followed by a forging step which imparts a quasi-final shape to said blade, comprising:

a core that extends in a central zone of the blade along a main direction; and
a casing that surrounds said core so as to form a peripheral zone of the blade,
wherein said core and said casing include a metallurgical bond between each other
resulting from said compression step,

said core includes a first material that includes at least a metal matrix, and said casing includes a second material that includes at least a metal matrix, said metal matrices of the first and second materials ~~having a same base metal which is aluminum~~ are aluminum based, and at least one of said first and second materials includes a metal matrix composite containing reinforcing elements dispersed in said aluminum based metal matrix.

Claim 23 (Canceled).

Claim 24 (Previously Presented): A blade according to claim 22, wherein said metal matrices of the first and second materials are respectively constituted by a first alloy and a second alloy, said first alloy and said second alloy being selected from aluminum-based alloys of ASTM standards series 2000, 5000, 6000, or 7000.

Claim 25 (Canceled).

Claim 26 (Previously Presented): A blade according to claim 22, wherein said reinforcing elements are particles of silicon carbide (SiC), of alumina (Al₂O₃), or of metal carbide of tungsten, boron, or titanium carbide.

Claim 27 (Previously Presented): A blade according to claim 26, wherein said reinforcing elements represent no more than 50% by weight of the composition of said metal matrix composite.

Claim 28 (Previously Presented): A blade according to claim 27, wherein said reinforcing elements represent 5% to 35% by weight of the composition of said metal matrix composite.

Claim 29 (Previously Presented): A blade according to claim 22, wherein one of said first and second materials includes said metal matrix composite containing said reinforcing elements dispersed in said metal matrix, and the other one of said first and second materials includes said metal matrix only.

Claim 30 (Previously Presented): A blade according to claim 29, wherein said first material includes said metal matrix only which comprises aluminum as its base metal, and wherein said second material includes said metal matrix composite containing said reinforcing elements dispersed in said metal matrix, said metal matrix including aluminum as its base metal and said reinforcing elements being made of silicon carbide (SiC) particles.

Claim 31 (Previously Presented): A blade according to claim 22, wherein said first and second materials include said metal matrix composite containing said reinforcing elements dispersed in said metal matrix, said reinforcing elements representing different percentages by weight of the composition of said metal matrix composite in said core and in said casing.

Claim 32 (Previously Presented): A blade according to claim 31, wherein said reinforcing elements represent a percentage by weight of the composition of said metal matrix composite that varies progressively in said first material and in said second material in a direction from a center of said core towards a periphery of said casing.

Claim 33 (Previously Presented): A blade according to claim 31, wherein for said reinforcing elements, said first material includes a percentage by weight of the composition of said metal matrix composite that is greater than in said second material.

Claim 34 (Previously Presented): A blade according to claim 31, wherein for said reinforcing elements, said second material presents a percentage by weight of the composition of said metal matrix composite that is greater than in said first material.

Claim 35 (Canceled).

Claim 36 (Previously Presented): A low pressure compressor including at least one of stationary vanes or moving blades according to claim 22.

Claim 37 (Previously Presented): A turbojet fan including blades according to claim 22.

Claim 38 (Previously Presented): A method of manufacturing a blade, comprising:

a) compressing a core and a casing to make a semi-finished product containing said core and said casing, said core and said casing including a metallurgical bond between each other resulting from said compression, said core including a first material that includes at least an aluminum based metal matrix, and said casing including a second material that includes at least an aluminum based metal matrix, and at least one of said first and second materials being made of a metal matrix composite containing reinforcing elements dispersed in said metal matrix;

b) forging the semi-finished product to obtain a blank with a quasi-final shape of the blade; and

c) machining said blank to provide a finished product forming said blade.

Claim 39 (Previously Presented): A method of manufacture according to claim 38 for obtaining a blade in which said first and second materials include said metal matrix composite containing said reinforcing elements dispersed in said metal matrix, wherein said reinforcing elements represent a percentage by weight of the composition of said metal matrix composite that varies progressively in said first material and in said second material in a direction from a center of said core towards a periphery of said casing, and wherein said compressing said core and said casing includes forming the core and the casing conjointly by a powder metallurgy technique.

Claim 40 (Previously Presented): A method of manufacture according to claim 38, wherein said compressing said core and said casing includes performing, in succession:

a1) using said first material to make a rod extending in a longitudinal direction, said rod serving to form said core placed in a center of the mechanical part;

a2) using said second material to make a sleeve extending in a longitudinal direction, said sleeve serving to form the casing of the mechanical part by surrounding said core;

a3) inserting the rod into the sleeve to form an assembly; and

a4) passing said assembly through an orifice of small section to reduce at least one dimension of said assembly in a direction perpendicular to said longitudinal direction to create a metallurgical bond between said rod and said sleeve.

Claim 41 (Previously Presented): A method of manufacture according to claim 40, wherein said passing said assembly through the orifice includes rolling or extrusion.

Claim 42 (Previously Presented): A method of manufacture according to claim 38, wherein said forging includes die stamping.

Claim 43 (Previously Presented): A blade according to claim 28, wherein said reinforcing elements represent 10% to 20% by weight of the composition of said metal matrix composite.

Claim 44 (Previously Presented): A blade according to claim 43, wherein said reinforcing elements represent about 15% by weight of the composition of said metal matrix composite.

Claim 45 (Previously Presented): A method of manufacture according to claim 40, wherein said passing said assembly through the orifice is performed at an elevated temperature.

Claim 46 (Previously Presented): A method of manufacture according to claim 45, wherein said passing said assembly through the orifice is performed at a temperature of about 400°C.

Claim 47 (Previously Presented): A method of manufacture according to claim 42, wherein said die stamping is performed at a temperature of about 430°C and a pressure of about 100 MPa.